

ELECTRICAL CABLE HAVING AN ORGANIZED SIGNAL  
PLACEMENT AND ITS PREPARATION

ABSTRACT OF THE DISCLOSURE

5 An electrical cable has a central conductor structure and a plurality of  
spiral conductor structures spirally wrapped around the central conductor  
structure. Each of the spiral conductor structures includes an electrically  
conducting spiral conductor, and a spiral conductor insulation overlying the spiral  
conductor. Each spiral conductor structure has no electrically conducting  
shielding thereon. Each spiral conductor structure retains a same pair of  
10 circumferentially adjacent spiral conductor structures along a length of the  
electrical cable. Each spiral conductor structure has a designated identity, and a  
circumferential arrangement of each spiral conductor structure is selected  
responsive to its designated identity and to the designated identities of each of the  
pair of circumferentially adjacent spiral conductor structures. An electrically  
15 conducting outer shield overlies the plurality of spiral conductors, and an outer  
insulation overlies the electrically conducting outer shield. The electrical cable  
is substantially circular viewed in cross section perpendicular to the local  
longitudinal axis.